



PHOTOGRAPHY

FAQ

Q What is a digital camera's RAW mode for?

A After capturing an image, a digital camera processes it in various ways. It adjusts the white balance, saturation and contrast, suppresses noise, sharpens detail and compresses it to JPEG format.

These processes are generally welcome but offer little or no user control. A RAW mode, on the other hand, saves the image without processing, recording only the raw data captured by the sensor. This leaves the user to perform each of the above processes using software, which typically gives greater control – and better results – than the camera's built-in processing.

On the downside, the files are much bigger, which slows performance, and the various RAW formats aren't widely supported. This often means the user is stuck with the software that came with the camera.

Ben Pitt

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OLYMPUS SP-550 UZ

★★

£306 inc VAT

The SP-550 UZ redefines the term ultra-zoom. Its 18x 28-504mm (35mm equivalent) focal length range is greater than that of any other ultra-zoom camera, and allows for both wide-angle photography and intimate close-ups of distant subjects. Its ISO range is bigger than anything we've seen before, too, going from 50 to 5,000. A 15 frames-per-second (fps) continuous mode completes some extraordinary headline features.

It's barely bigger than Panasonic's DMC-FZ8 (reviewed opposite) but is significantly heavier once it's loaded with four AA batteries. You'll need to buy these separately once the supplied disposable cells run out. Battery life is excellent, though, capturing over 700 shots using 2300mAh NiMH batteries. The controls are well laid out and keep the most important options close to hand, although manual focus is buried in the inelegant menu system.

Performance lets the camera down badly. The four-second startup time is perhaps forgivable considering the size of the lens, but four seconds between shots is poor. It appears that a combination of slow xD media and insufficient buffer memory were primarily to blame, although the slow autofocus doesn't help. At telephoto settings, focus hunting took up to five seconds. The 15fps continuous mode is available only at 1.2-megapixel resolution and uses heavy JPEG compression to keep the 20-shot maximum down to about 3MB in total so that the memory buffer can cope. At the top image-quality setting, the continuous mode runs at 1fps and is limited to three shots. A RAW shooting mode is available but the 15-second wait between shots means we wouldn't consider using it.

SUMMARY

- ✓ Huge zoom range
- ✗ Slow performance
- ✗ Image quality doesn't live up to the price

DIGITAL CAMERA 7.1 megapixels (3,072x2,304), 18x optical zoom (28-504mm), xD slot (20MB internal), 4x AA batteries
PART CODE N2517692
SUPPLIER www.pcwb.com
DETAILS www.olympus.co.uk

PERFORMANCE (see page 56)

Battery life **718 shots**

-50% Reference +50% +100%



Casual inspection of the SP-550 UZ's images was promising, with faithful colour reproduction in a range of lighting conditions and particularly impressive, well-saturated colours in low light. The 1cm macro focus gave stunning close-ups and the CCD-shift optical image stabilisation kept telephoto shots sharp.

However, on closer inspection we began to find faults. The automatic white balance didn't cope well with artificial light and was fooled by monochromatic scenes, rendering green foliage a surreal silver colour. Focus wasn't as sharp as that of the other 7-megapixel cameras we tested, particularly towards the right of images, where chromatic aberrations meant that red, blue and green elements of the image didn't line up perfectly. We usually had to look close to notice this problem but in high-contrast and macro shots it was more obvious. High-contrast scenes also resulted in purple fringing, giving a halo-like glow to dark objects set against a bright background.

Noise was reasonably understated and roughly on a par with that from Panasonic's DMC-FZ8, but ISO 800 gave borderline images and higher settings were pointless.

We have been willing to overlook the slow performance of previous Olympus cameras because their prices have been particularly attractive, or their image quality exceptional, but the SP-550 UZ offers neither defence.

Ben Pitt

Also consider...

FUJIFILM FinePix F20 Zoom

★★★★★

£113 inc VAT



The FinePix F20 Zoom is a classy

point-and-shoot camera that specialises in low-light photography. It produced excellent results at its ISO 400 setting, although shots were more varied at ISO 800 and above. Performance was also up to scratch, with just two seconds between shots. Most importantly, image quality was excellent, making this camera brilliant value.



DIGITAL CAMERA 6.1 megapixels (2,848x2,136), 3x optical zoom (35-108mm), xD slot (10MB internal), li-ion battery
PART CODE N0077830A
SUPPLIER www.amazon.co.uk
DETAILS www.fujifilm.co.uk
✓ Superb image quality
✗ Varying quality at high ISO settings
FULL REVIEW Feb 2007

Battery life **432 shots**

-50% Reference +50% +100%

CANON EOS 400D

★★★★★

£466 inc VAT



The successor to the hugely popular EOS

350D, Canon's EOS 400D is the best affordable digital SLR camera on the market. Incredibly fast focusing, a high capture rate and brilliant image quality from the 10.1-megapixel sensor all make it really hard not to love this camera. For photography enthusiasts who want to upgrade from a film SLR or compact camera, this is undoubtedly the model to get.



DIGITAL CAMERA 10.1 megapixels (3,888x2,592), 3x optical zoom (18-55mm), CompactFlash slot, li-ion battery
PART CODE 1237 B009AA
SUPPLIER www.onestop-digital.com
DETAILS www.canon.co.uk
✓ Fantastic image quality
✗ Finite continuous mode
FULL REVIEW Feb 2007

Battery life **505 shots**

-50% Reference +50% +100%

PANASONIC Lumix DMC-FZ8

★★★★★

£270 inc VAT

Panasonic's DMC-FZ7 impressed us enough to give it four stars in our group test of ultra-zoom cameras (*Labs, Shopper* March 2007), despite being fairly long in the tooth compared with the others on test. Therefore, it was with some excitement that we unpacked its successor, the DMC-FZ8.

Cosmetically, the two cameras are almost identical, although we're glad to see that macro focus is now available via a button rather than the mode dial, so it's no longer mutually exclusive to the manual exposure modes. There's a predictable increase from six to seven megapixels, and the electronic viewfinder (EVF) and LCD screen both have higher resolutions, too, with the latter now at 207,000 pixels. Performance is excellent at just over a second between shots and 2fps in continuous mode. The FZ7 was a touch faster, though, presumably because of its lower resolution.

The FZ8's automatic ISO speed management is more sophisticated than most. It's possible to define the maximum ISO speed you're willing to tolerate: 400, 800 or 1,250. The camera will use this maximum setting only when low light demands it, but this means you have some degree of control without having to adjust the ISO speed manually for each shot. Meanwhile, an Intelligent ISO feature uses faster ISO (and hence shutter)

speeds when it detects moving subjects in the composition. It's a great idea that often worked well, but we found that it didn't always behave as we'd like, sometimes using shutter speeds of one second at ISO 200, which resulted in needlessly blurry shots. Our only explanation is that the FZ8 thought it was mounted on a tripod, which was a clever assumption but regrettably incorrect in this case. Even so, Intelligent ISO, aided by the excellent optical image stabilisation that's common to all Panasonic cameras, gives welcome improvements to medium- to low-light photography.

Heavy noise-reduction processing in low light is common to all Panasonic cameras, resulting in a smearing effect that sacrifices subtle textures and fine detail. To Panasonic's credit, its cameras are getting better in this respect, and the FZ8's images in low light at ISO 400 and 800 are no worse than average for this type of camera. Sadly, images at ISO 400 and

above were clean and sharp enough only for viewing onscreen and printing no bigger than 7x5in. However, it's possible to get around Panasonic's noise reduction by using the new RAW shooting mode. RAW photos are captured with no noise reduction, leaving this task and various others to the sophisticated if somewhat bewildering Silkypix RAW conversion software. Silkypix is capable of producing



much better photos than the camera's built-in processing. RAW images come in at 11MB with a JPEG image saved alongside for reference, but this doesn't slow performance too much and we still managed a shot every 3½ seconds.

Fortunately, the best things about the FZ7 remain intact. The 12x zoom stabilised lens and accessible manual controls make it a powerful creative tool, and while it's relatively compact for an ultra-zoom camera, it's extremely comfortable and satisfying to use. Best of all, image quality is extremely high, with consistently excellent colours and exceptionally sharp detail in bright lighting. Meanwhile, low-light detail is now average (rather than below average on the FZ7), and above average if you shoot in RAW mode.

The only significant drawback is the price. Competing cameras from Canon, Sony and others cost between £30 and £70 less, while the fantastic FujiFilm S6500fd (see 'Also consider...' below), which is just as impressive if not as directly comparable, costs just £200. As we went to press, the FZ7 is available for just £156. If the FZ8's price falls to below £230 we'll be happy to give it our unreserved recommendation. Until then, there are better deals available.

Ben Pitt

SUMMARY

- ✓ Excellent images
- ✓ Quick and satisfying to use
- ✗ Pricy

DIGITAL CAMERA 7.1 megapixels (3,072x2,304), 12x optical zoom (36-432mm), SDHC slot (27MB internal), li-ion battery
PART CODE DMC-FZ8EB-K
SUPPLIER www.expansys.com
DETAILS www.panasonic.co.uk

PERFORMANCE (see page 56)

Battery life **469 shots**
 -50% Reference +50% +100%

PANASONIC Lumix DMC-FZ50

★★★★★

£330 inc VAT

BEST BUY Panasonic's Lumix DMC-FZ50 gives almost digital SLR performance on a much lower budget. The huge 12x optical stabilised zoom lens and 10-megapixel CCD allow you to get close to the action. Image quality is excellent at low ISO settings, but ISO 400 or higher produces grainy images. It's the best super-zoom digital camera on the market.



DIGITAL CAMERA 10 megapixels (3,648x2,736), 12x optical zoom (35-420mm), SD slot (32MB card supplied), li-ion battery
PART CODE PANLUMFZ50
SUPPLIER www.onestop-digital.com
DETAILS www.panasonic.co.uk

- ✓ Fantastic handling; beautiful pictures in well-lit conditions
 - ✗ Image quality slumps as ISO setting rises
- FULL REVIEW** Jan 2007

Battery life **359 shots**
 -50% Reference +50% +100%

FUJIFILM FinePix S6500fd Zoom

★★★★★

£206 inc VAT

BEST BUY The S6500fd's zoom lens starts at 28mm for wide-angle photography, while a face-detection system helps you to focus and expose portraits of up to 10 people. High colour accuracy and detail make for excellent pictures, while low-light photography is excellent. This is an astounding camera for the price.



DIGITAL CAMERA 6.1 megapixels (2,848x2,136 pixels), 11x optical zoom, 10MB internal memory, xD slot, 4x AA (alkalines supplied) batteries
PART CODE N077950A
SUPPLIER www.savastore.com
DETAILS www.fujifilm.co.uk

- ✓ Fantastic image quality
 - ✓ Very low noise at ISO 800
- FULL REVIEW** Mar 2007

Battery life **530 shots**
 -50% Reference +50% +100%

PANASONIC Lumix DMC-FX3

★★★★★

£130 inc VAT

The Lumix DMC-FX3 has image stabilisation built in, which is almost unheard of at this price and helps you take blur-free photos at low shutter speeds. Image quality is the camera's strongest asset and photos were exceptionally detailed with lifelike colours. It's a fantastic price for a high-quality camera.



DIGITAL CAMERA 6 megapixels (2,816x2,112), 3x optical zoom (35-105mm), SD slot (13.5MB internal), li-ion battery
PART CODE DMCFX3EB5
SUPPLIER www.empiredirect.co.uk
DETAILS www.panasonic.co.uk

- ✓ Excellent images in most conditions
 - ✗ Image quality deteriorates in low light
- FULL REVIEW** May 2007

Battery life **380 shots**
 -50% Reference +50% +100%

PENTAX Optio M30

★★★★
£128 inc VAT

Pentax's Optio M10 (*What's New, Shopper* July 2006) set a new standard for image quality from a £150 camera. It shows just how much things have changed in a year that the M30 takes higher-resolution photos and videos and has a slim aluminium case and a lithium-ion battery in place of the M10's plastic body and AA batteries, and yet its £128 price isn't particularly remarkable.

The menu system is straightforward and quick to navigate. A green button switches the camera to a simplified mode but can be reprogrammed as a short cut to another option. Still, this isn't as useful as Fn buttons on other Pentax cameras, which give quick access to four options simultaneously.

It's unusual to find manual focus at this price, although the 2½in screen's 115,000-pixel resolution makes it tricky to adjust precisely. Portrait mode includes face detection to help with focus and exposure, but it takes a while to find faces in a scene. General shooting is slow, too, at around three seconds between shots.

Continuous shooting starts at 2fps but slows to 0.5fps after four shots.



Image quality gave us no cause for concern, with colours that were just as pleasing as those from the much pricier cameras we tested this month. Focus was up to scratch, too, although it deteriorated towards the corners. However, the main problem was that image noise was visible even when shooting in bright conditions, giving pictures a slightly messy quality. Noise wasn't

excessive in low light but, as with many compact cameras, we wouldn't use this above ISO 400.

The M30 is a worthy successor to the M10 and intervening M20, but the competition has moved on even further. FujiFilm's FinePix F20 (see 'Also consider...' page 30) shows that you can expect fantastic image quality for around £120, but the M30 can't quite provide it.

Ben Pitt

SUMMARY

- ✓ Smart, slim design
- ✓ Dependable image quality
- ✗ Mediocre performance

DIGITAL CAMERA 7.1 megapixels (3,072x2,304), 3x optical zoom (38-114mm), SD slot (22MB internal), li-ion battery
PART CODE 19255
SUPPLIER www.expansys.com
DETAILS www.pentax.co.uk

PERFORMANCE (see page 56)



CANON PowerShot A630

★★★★★
£159 inc VAT



It's no surprise that cameras aimed at enthusiasts cost more than those aimed at casual users, but now that £120 cameras can give excellent image quality, you shouldn't need to pay much more for one that adds full photographic control. Canon's PowerShot A630 is the first camera we've seen that fits the brief. It's an 8-megapixel camera with a 4x zoom lens and a full set of manual focus, exposure and priority modes. Canon has made sacrifices in the LCD screen, which despite its 2½in size has a meagre 115,000 resolution. However, it's hinged to aid shots at awkward angles, and along with the optical viewfinder, the A630 doesn't lack visual feedback. Its use of four AA batteries is another cost-cutting measure, so you'll have to budget for rechargeables. Our final gripe is that the camera is bulky compared with most 3x and 4x zoom models. Still, the large battery compartment doubles as an ergonomic handgrip, and there's plenty of space at the back for a generous collection of buttons.



Fortunately, Canon gets the most important aspects of camera design spot on. Manual exposure is extremely well implemented, with clear visual feedback and accessible controls. The camera is fast too, at two seconds between shots and with a 1.8fps continuous mode. The real highlight is image quality. Colours were vibrant and accurate, if not quite in the same class as those of the best

compact cameras we've seen. However, detail was up there with the best, showing a distinct advantage over Panasonic's DMC-FX3 (see 'Also consider...' page 31). Low-light images at ISO 400 looked great, and we'd be happy to use the A630 at ISO 800 when lighting conditions demanded it.

It's not perfect, but such high quality and versatility are extraordinary at this price.

Ben Pitt

SUMMARY

- ✓ Excellent image quality
- ✓ Full, accessible photographic control
- ✗ Bulky design

DIGITAL CAMERA 8.0 megapixels (3,264x2,448), 4x optical zoom (35-140mm), SDHC slot (16MB supplied), 4x AA batteries
PART CODE 1288B007AA
SUPPLIER www.amazon.co.uk
DETAILS www.canon.co.uk

PERFORMANCE (see page 56)



CHOOSING A... Compact Digital Camera

Follow the steps to find your ideal specs

RESOLUTION: 4 megapixels
ZOOM: 3x optical (35-105mm)
MONITORING: 1.8in, 85,000-pixel LCD screen
SUPPLIED MEMORY: 10MB internal
BATTERIES: 2x AA disposable
 Recommended minimum in grey

1 A digital camera with the specifications shown in grey will suit those who want to take pictures to view on their PC and create 7x5in prints. It should cost around £80, but there may be hidden downsides such as slow performance and very basic user controls.

2 Spend more and you'll get a higher resolution. An 8-megapixel sensor has the potential to produce sharp prints up to A4 size, but only if it and the lens are suitably high quality. There are 10-megapixel compact cameras available, but we've yet to see one that's significantly better than 8-megapixel models. Most people don't print enlargements so a 6-megapixel sensor is sufficient.

3 A 3x zoom lens gives reasonable scope for framing your shots, but a larger range can do wonders for your photographic skills. Some compact cameras manage a 6x zoom while a few go as far as 10x. However, big zooms need optical image stabilisation to avoid blur at extreme settings. Alternatively, consider a wide-angle lens, denoted by a 28mm or lower minimum focal length.

4 Big LCD screens are a treat to use but they don't always offer sharper detail. A 2½in screen is common even in the budget market, but only the best have resolutions of 200,000 or more pixels.

5 Consider hidden costs: budget £20 for a 1GB memory card, as the bundled memory will never be enough. If your chosen camera doesn't have rechargeable batteries, budget an extra £15 to buy a set.

6 Don't forget that specifications tell you very little about image quality; you'll need to read our reviews for that. In a compact camera, we believe that the user shouldn't have to grapple with complicated controls to get great images in all lighting conditions.